

WHAT IS CLAIMED IS:

1. A control method for an image input apparatus for reading an original and compressing image data of the read original in real time, said method comprising:

5 a memory area ensuring step of ensuring a memory area for storing compressed image data;

a read step of reading an original and outputting image data;

10 a compression step of compressing the image data in real time;

a storage step of storing the compressed image data in the memory area ensured in said memory area ensuring step;

15 a determination step of determining whether the compressed image data is completely stored in the memory area;

20 a compression ratio change step of, when it is determined in said determination step that the image data is not completely stored, changing a compression ratio in the compression step; and

25 a repeat step of, when the compression ratio is changed in said compression ratio change step, controlling to repeat said read step, said compression step, and said storage step using the changed compression ratio.

2. The method according to claim 1 further

comprising:

a measurement step of measuring a data amount of the compressed image data; and

a memory area re-ensuring step of, when it is determined in said determination step that the image data is not completely stored, re-ensuring a memory area capable of storing image data in the data amount measured in said measurement step or a maximum memory area available when the memory area cannot be ensured,

wherein, in said compression ratio change step, the compression ratio for the compression step is changed if it is determined in said determination step that the image data is not completely stored and if the memory area capable of storing the image data having the data amount measured in said measurement step cannot be ensured in said memory area re-ensuring step, and

said repeat step controls to repeat said read step, said compression step, and said storage step after said memory area re-ensuring step and said compression ratio change step if it is determined in said determination step that the image data is not completely stored.

3. The method according to claim 1 further comprising an input step of inputting the maximum number of times of read of a single original in said

read step,

wherein, if the number of times of said read step repeated is smaller than the maximum number of times, said determination step to said repeat step is performed.

4. The method according to claim 1, wherein, in said memory area ensuring step, the memory is ensured on the basis of the compression ratio and an original size.

5. The method according to claim 1, wherein, in said compression ratio change step, the compression ratio is increased by one step.

6. The method according to claim 1, wherein, in said compression step, JPEG compression is performed.

7. A control method for an image input apparatus for reading an original and compressing image data of the read original in real time, said method comprising:

a memory area ensuring step of ensuring a memory area for storing compressed image data;

a read step of reading an original and outputting image data;

a compression step of compressing the image data in real time;

a storage step of storing the compressed image data in the memory area ensured in said memory area ensuring step;

a determination step of determining whether the

compressed image data is completely stored in the memory area;

1 a resolution change step of, when it is determined in said determination step that the image data is not completely stored, changing a resolution in said read step; and

2 a repeat step of, when the resolution is changed in said resolution change step, controlling to repeat said read step, said compression step, and said storage step using the changed resolution.

3 8. The method according to claim 7 further comprising:

4 a measurement step of measuring a data amount of the compressed image data; and

5 a memory area re-ensuring step of, when it is determined in said determination step that the image data is not completely stored, re-ensuring a memory area capable of storing image data in the data amount measured in the measurement step or a maximum memory area available when the memory area cannot be ensured,

6 wherein, in said resolution change step, the resolution for said read step is changed if it is determined in said determination step that the image data is not completely stored and if the memory area capable of storing the image data having the data amount measured in said measurement step cannot be

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ensured in said memory area re-ensuring step, and
said repeat step controls to repeat said read
step, said compression step, and said storage step
after said memory area re-ensuring step and said
5 resolution change step if it is determined in said
determination step that the image data is not
completely stored.

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9. The method according to claim 7 further
comprising an input step of inputting the maximum
10 number of times of read of a single original in the
read step,

wherein, if the number of times of said read step
repeated is smaller than the maximum number of times,
said determination step to said repeat step is
15 performed.

10. The method according to claim 7, wherein, in said
memory area ensuring step, the memory area is ensured
on the basis of an original size.

11. The method according to claim 7, wherein, in said
20 resolution change step, the resolution is decreased by
one step.

12. The method according to claim 11 further
comprising a setting step of setting a width of
one-step decrease of the resolution.

25 13. The method according to claim 7, wherein, in said
resolution change step, the resolution is changed for a

color difference component of the image data.

14. The method according to claim 7, wherein, in said compression step, JPEG compression is performed.

15. An image input apparatus comprising:

memory area ensuring means for ensuring a memory area for storing compressed image data;

read means for reading an original and outputting image data;

compression means for compressing the image data in real time;

storage means for storing the compressed image data in the memory area ensured by said memory area ensuring means;

determination means for determining whether the compressed image data is completely stored in the memory area;

compression ratio change means for, when it is determined by said determination means that the image data is not completely stored, changing a compression ratio used by said compression means; and

control means for, when the compression ratio is changed by said compression ratio change means, controlling to repeat the read of the original using the changed compression ratio.

16. The apparatus according to claim 15 further comprising:

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measurement means for measuring a data amount of the compressed image data; and

memory area re-ensuring means for, when it is determined by said determination means that the image data is not completely stored, re-ensuring a memory area capable of storing image data in the data amount measured by said measurement means or a maximum memory area available when the memory area cannot be ensured,

wherein said compression ratio change means changes the compression ratio to be used by said compression means if it is determined by said determination means that the image data is not completely stored and if the memory area capable of storing the image data having the data amount measured by said measurement means cannot be ensured by said memory area re-ensuring means, and

said control means controls to repeat the read of the original after the memory area is re-ensured by said memory area re-ensuring means and/or after the compression ratio is changed by said compression ratio change means if it is determined by said determination means that the image data is not completely stored.

17. The apparatus according to claim 15 further comprising input means for inputting the maximum number of times of read of a single original by said read means,

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wherein, if the number of times of read operation of the single original by said read means is smaller than the maximum number of times and if it is determined by said determination means that the image data is not completely stored, said control means controls to repeat the read by said read means after the memory area is re-ensuring by said memory area re-ensuring means and/or after the compression ratio is changed by said compression ratio change means.

10 18. The apparatus according to claim 15, wherein said memory area ensuring means ensures the memory are on the basis of the compression ratio and an original size.

15 19. The apparatus according to claim 15, wherein said compression ratio change means increases the compression ratio by one step.

20. The apparatus according to claim 15, wherein said compression means performs JPEG compression.

21. An image input apparatus comprising:
memory area ensuring means for ensuring a memory
20 area for storing compressed image data;
read means for reading an original and outputting image data;
compression means for compressing the image data in real time;
25 storage means for storing the compressed image data in the memory area ensured by said memory area

ensuring means;

determination means for determining whether the compressed image data is completely stored in the memory area;

5 resolution change means for, when it is determined by said determination means that the image data is not completely stored, changing a resolution used by said read means; and

control means for, when the resolution is
10 changed by said resolution change means, controlling to repeat the read of the original using the changed resolution.

22. The apparatus according to claim 21 further comprising

15 measurement means for measuring a data amount of the compressed image data; and

memory area re-ensuring means for, when it is determined by said determination means that the image data is not completely stored, re-ensuring a memory
20 area capable of storing image data in the data amount measured by said measurement means or a maximum memory area available when the memory area cannot be ensured,

wherein said resolution change means changes the resolution to be used by said read means if it is
25 determined by said determination means that the image data is not completely stored and if the memory area

capable of storing the image data having the data
amount measured by said measurement means cannot be
ensured by said memory area re-ensuring means, and
said control means controls to repeat the read of
5 the original after the memory area is re-ensured by
said memory area re-ensuring means and/or after the
resolution is changed by said resolution change means
if it is determined by said determination means that
the image data is not completely stored.

10 23. The apparatus according to claim 21 further
comprising input means for inputting the maximum number
of times of read of a single original by said read
means,

wherein, if the number of times of read operation
15 of the single original by said read means is smaller
than the maximum number of times and if it is
determined by said determination means that the image
data is not completely stored, said control means
controls to repeat the read by said read means after
20 the memory area is re-ensured by said memory area
re-ensuring means and/or after the resolution is
changed by said resolution change means.

24. The apparatus according to claim 21, wherein said
memory area ensuring means ensures the memory area on
25 the basis of an original size.

25. The apparatus according to claim 21, wherein said

resolution change means decreases the resolution by one step.

26. The apparatus according to claim 25 further comprising setting means for setting a width of one-step decrease of the resolution.

27. The apparatus according to claim 21, wherein said resolution change means changes the resolution for a color difference component of the image data.

28. The apparatus according to claim 21, wherein said compression means performs JPEG compression.

29. A computer program product comprising a computer usable medium having computer readable program code means embodied in said medium for a control method for an image input apparatus for reading an original and compressing image data of the read original in real time, said product including:

first computer readable program code means of ensuring a memory area for storing compressed image data;

second computer readable program code means of reading an original and outputting image data;

third computer readable program code means of compressing the image data in real time;

fourth computer readable program code means of storing the compressed image data in the memory area ensured by said first computer readable program code

means;

fifth computer readable program code means of determining whether the compressed image data is completely stored in the memory area;

5 sixth computer readable program code means of, when it is determined by said fifth computer readable program code means that the image data is not completely stored, changing a compression ratio used by said third computer readable program code means; and

10 seventh computer readable program code means of, when the compression ratio is changed by said sixth computer readable program code means, controlling to execute said second to fourth computer readable program code means using the changed compression ratio.

15 30. A computer program product comprising a computer usable medium having computer readable program code means embodied in said medium for a control method for an image input apparatus for reading an original and compressing image data of the read original in real
20 time, said product including:

first computer readable program code means of ensuring a memory area for storing compressed image data;

25 second computer readable program code means of reading an original and outputting image data;

third computer readable program code means of

compressing the image data in real time;

fourth computer readable program code means of
storing the compressed image data in the memory area
ensured by said first computer readable program code
means;

fifth computer readable program code means of
determining whether the compressed image data is
completely stored in the memory area;

sixth computer readable program code means of,
when it is determined by said fifth computer readable
program code means that the image data is not
completely stored, changing a resolution used by said
second computer readable program code means; and

seventh computer readable program code means of,
when the resolution is changed by said sixth computer
readable program code means, controlling to execute
said second to fourth computer readable program code
means using the changed resolution.